THE
EUGENICS REVIEW

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"*Eugenics is the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage.*"—*Sir Francis Galton, 1904.*

NOTES OF THE QUARTER

The *SOCIETY'S* New President

IT is our pleasant duty to record the election as our President of Sir Charles Galton Darwin, K.B.E., M.C., M.A., Sc.D., F.R.S. We are honoured by his acceptance of this office, not only because his name links us afresh with Francis Galton, our Founder and his kinsman, and with Major Leonard Darwin, to whom this *Society* owes so much, but also because of his own distinction in the world of science and his interest in the aims of the *Eugenics Society*.

Sir Charles Darwin delivered the Galton Lecture in 1939 on the subject of "Positive Eugenic Policy"; he was at that time Director of the National Physical Laboratory. His connection with the *Eugenics Society* dates from 1930, when he first became a Fellow.

To our retiring President, Sir Alexander Carr-Saunders, M.A., LL.D., first recipient of the Galton Gold Medal, we express our appreciation of his unremitting interest in the direction of the *Society's* affairs since his election to office in 1949.

World Population and World Food Resources

EUGENISTS are primarily interested in the qualities of populations rather than in mere numbers; but they must nevertheless take account of numbers, since it is on them that plans must be based. No more important report on the balance of world population and world food resources has yet appeared than the *Second World Food Survey* published by the Food and Agriculture Organization of the United Nations.* The difficult task which the staff of F.A.O. (among whom Dr. Howard Tolly and Mr. David Lubbock, who have left the Organization, are appreciatively mentioned) have set themselves derives from the basic ideas which, at the Hot Springs Conference in 1943, led to the creation of F.A.O. This conference first "urged Governments to adopt as their *ultimate nutritional goals* dietary standards or allowances based upon scientific assessments of the amount and quality of foods, in terms of nutrients, which promote health; secondly it drew the attention of governments to the need for *more immediate consumption goals* which necessarily must be based upon the practical possibilities of improving the food supplies of their populations." (Italics ours.) A clear distinction is thus drawn between what, in a long-term perspective, is conceived as ideally desirable and what, in a short-term, is deemed practically possible.

The *Second World Food Survey*, which effectively supplements F.A.O.'s first world food survey published in 1946, and which is equipped with better current statistics and better estimates of food requirements than were available six years before, makes a brave attempt to formulate, in terms of calorie requirements per head per day, and

* F.A.O. Rome. November 1952. Pp. 59. H.M.S.O. Price 2s. 6d.

also (taking the quality of food into account) in terms of animal protein per head per day, these ideally desirable and immediately feasible goals. The report further takes due notice of probable population changes.

The immediate goal is 1960—seven years ahead. But the authors are careful to warn the reader that the targets for 1960, to which much careful thought has been applied, can scarcely be regarded as in practice attainable. They are, in fact, "a compromise between what may be desirable from the standpoint of nutrition and what may be feasible in practice. They are not ideal nutritional goals for 1960, but rather indicate the general direction along which improvement should move."

In a succinct introduction to the report, Mr. Norris E. Dodd, the Director-General of F.A.O., ruefully surveys the implications of the new information to hand since 1946, which gives to the second survey "greater depth" than the first. There are, he warns us, no grounds for complacency: five years after the end of the war the average food supply per person over large areas of the world was lower than before the war; clear signs of change in the scale of food production, essential to improved nutrition, are lacking; annual increases in food production are barely keeping pace with increases in the population; health measures in underdeveloped countries, among them the control of malaria, will probably yield higher survival rates; and raised birth-rates in well-developed countries which now export food are rapidly increasing their populations. The picture, Mr. Dodd concludes, is scarcely encouraging; indeed, it "contrasts disturbingly" with views and hopes earlier expressed by F.A.O. A formidable challenge is presented both to governments and to F.A.O. which calls for enormously increased efforts.

Careful scrutiny of the ensuing report fully bears out Mr. Dodd's soberly expressed conclusions and warnings. The following facts and figures speak for themselves.

The average caloric value of food per head per day throughout the world excluding the U.S.S.R. was "recently" (i.e. 1950 and 1951) lower than before the war. If the prewar value be taken as 100, the "recent" value is 94. The 1960 target is fixed at 102 (2 per cent only higher than the prewar average). In respect of eight major food crops, which, directly or indirectly, furnish 80 per cent of the world's food supply, the "recent" production per head was 3 per cent below prewar. If the prewar figure for each region be taken as 100, the following were the average values from 1949-51 for certain world regions: Far East, 87; Europe (wherein, before the fall of the iron curtain, food flowed from the Danubian countries to the west and north-west), 90; Near East, 95; Oceania, 103; North and Central America, 124. The figure for the world as a whole is 97. The decline of grain production in the Far East, which contains half the population of the world and where, by comparison with other regions, standards have been low, is especially noteworthy.

Of F.A.O.'s 1960 target it can be confidently said that, though modest, it is unattainable. First as to its modesty. In terms of calories per head per day it calls for an improvement of 2 per cent on prewar world averages. In terms of nutritional quality the amount of protein in the diet is important. F.A.O. here lays stress on animal (contrasted with vegetable) protein, the quantity of which in the diet is regarded as a good indicator of nutritional quality. The consumption of animal protein per head per day throughout the world is shown, in the report's fourth appendix, to vary within immensely wide limits. Thus, in recent years, the largest consumption (65 grams per head per day) was in Australia and New Zealand; the lowest (4 grams a day) was in Indo-China and Indonesia. The 1960 target for these last two countries, and also for the Belgian Congo, where recent consumption was 5 grams a day, is but 6 grams a day. But the modesty of the 1960 target can best be appreciated from the following diagram, which shows the distribution of about 80 per cent of the world's population according to its daily supply of animal protein.

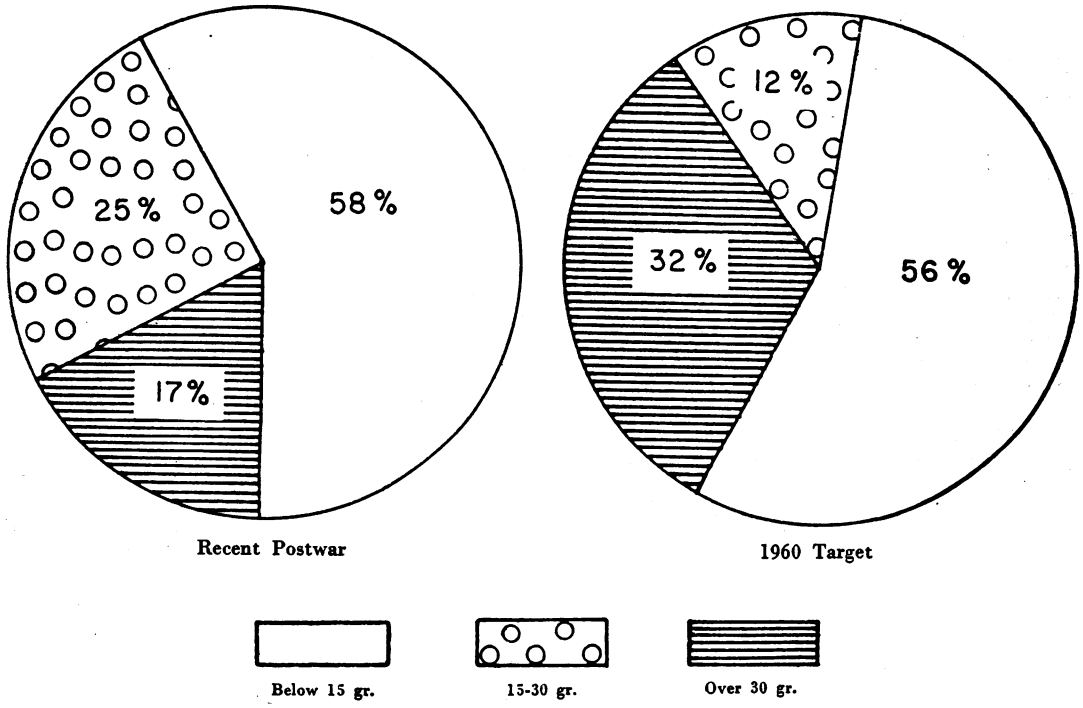
The recent postwar position (left-hand figure) is compared with the 1960 target (right-hand figure). It will be seen that, in

respect of its supply of animal protein, the population of the world is divided into three groups which received respectively below 15 grams, 15-30 grams and over 30 grams. The 1960 target leaves over half the world's population (56 per cent) in the lowest category. And for several countries the projected supply is much less than 30 grams;

Food Group	*Percentage increase required*
Cereals	19
Starchy roots	12
Pulses	47
Sugar	15
Meat	30
Eggs	39
Fish	47
Milk	33

DISTRIBUTION OF WORLD'S POPULATION ACCORDING TO DAILY AVERAGE SUPPLIES OF ANIMAL PROTEIN.

(Comprising approximately 80 per cent of the world's population.)



Indo-China, Indonesia and the Belgian Congo with but 6 grams are extreme examples.

Secondly, F.A.O.'s 1960 target is unattainable. This is best shown by the following table which, in respect of eight food-groups, expresses the percentage increases required in gross supplies to meet 1960 targets. (The table is a condensation of the report's Table 15, which gives percentages for the seven geographical regions into which, for purposes of this report, the world is divided.)

The table compares these percentages with an estimated increase in the population of the world between the date on which the food data were available (probably 1949 or 1950) and the target date of 1960. An increase of 11 per cent in world population is estimated. Information recently to hand suggests that this figure may be too small; if it were exceeded, the required increases in the eight above-mentioned food groups would need to be still larger than those given. But taking the figures as they stand, it will

be seen that to attain the 1960 target a conspicuously larger percentage increase in food production than in population will be necessary. An estimated increase of 11 per cent in world population calls for increases of from 12 to 47 per cent in foods. The report here speaks for itself.

> "For the world as a whole," it says, "with the exception of starchy roots and sugar, the estimated increase in gross supplies needed to attain the target is far in excess of the estimated increase in population. They are particularly heavy for pulses and livestock products. But this by no means indicates the full extent of the problem. To achieve the targets, it is vital that the largest increase in production should occur in the areas where the need is greatest. Increased production in the surplus regions cannot possibly furnish the expansion of food supplies needed in the world as a whole. At best . . . the surplus areas can provide only a small fraction of the needs of the major deficit regions. These needs must be met almost entirely from their own production."
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> Expansion, the report goes on to say, is specially needed in the Far East, Near East and Africa. "In these regions the increase in the supply of cereals must be twice as large as the expected increase in population; for pulses, meat, milk, eggs and fish, the increase must be proportionately still greater."

The target for 1960, as earlier remarked, is more concerned with what is immediately practicable and feasible than with what is ideally needed. The targets, says the report, "do not represent the full satisfaction of nutritional requirements." If they did, the increases called for in the supply of many foods, especially livestock products (meat, milk, eggs) would be much larger than those above shown "and, beyond doubt, far in excess of what could be achieved by 1960 under the most favourable conditions."

The main burden of meeting the postwar food deficits of the world has been shouldered by three countries, namely the U.S.A., Canada and Australia, which, on a 1949-51 yearly average, have exported 25·6 million metric tons of grain (five kinds) of which 14 million came from the U.S.A. These are the leading "food-surplus countries," whose exports went far to mitigate the increasing shortages of the "food-deficit countries." Except for bread grains, international trade in food was less in 1949-50 than before the war. Indeed, the war has had peculiar effects. Dislocations affecting Korea, Manchuria and Formosa have converted India, Malaya and Indonesia into importers of bread from North America and even of rice from Brazil and Egypt. The populous Far Eastern region, traditionally an exporter of food, has now become a net importer. But the large food surpluses of the U.S.A., from which the rest of the world has benefited, were largely the products of exceptionally favourable harvests, and upon such the world cannot indefinitely count. Even recent improvements in the world food position are precariously based.

There is a further reason, of which the report has perhaps not taken sufficient account, for thinking that the present world position is worse than is represented. The report's last appendix (no. VII) lists the countries of the world by regional and sub-regional groups. There are, as remarked above, seven regions which include 177 countries. Of these, 63 have and 114 have not furnished F.A.O. with information about their food supplies. The 114 non-responding countries are mostly small and have but small populations, amounting to about a fifth (20 per cent) of the world total. These countries which were not in a position to supply F.A.O. with the requisite information are mostly undeveloped countries; in the African region, for example (from which Egypt, comprised in the Near Eastern region, is excluded), information was available of but nine out of forty-two countries. It seems probable that if the food conditions of the 114 countries which did not provide information had been taken into account, the world average would be worse than is given. But recent standards would not necessarily suffer more from comparison with those of before the war.

To the minds of many readers of this valuable report an ultimately crucial question, reasonable to ask but difficult though not impossible to answer, will present itself. By how much should the population of the world be reduced today to make universal provision, throughout the seven geographical

regions, of a physiologically satisfactory dietary? And by how much could the populations of these regions be allowed to increase each year if they are to continue to be adequately fed?

It is possible that certain members of the staff of F.A.O. would have liked to pose these two simple but essential questions and to have risked provisional answers. It is also possible that they refrained for a simple but unacknowledged reason. The answers would have compelled the recognition that exhortations to all regions of the world to increase their food production should have been accompanied by equally vehement warnings to some of these regions to restrict the growth of their populations. But such a warning cannot be corporately given by F.A.O., whatsoever may be the private views of individual members of its staff. F.A.O., like the United Nations of which it forms a part, is an international body among whose member-States are several who will not tolerate the plea that human numbers should, as a principle of policy, be controlled by means other than sexual continence. Hence it is especially important that these basic questions should be carefully considered by a responsible body whose freedom of expression is not hampered by doctrinal or religious inhibitions. Such a body has, in the last month, been convened by P.E.P., with which the *Eugenics Society* has in the past collaborated. It is doing so again in the new project.

The Inheritance of Fertility

On general grounds it is reasonable to suppose that inherited factors are important in determining fertility; it is possible to show conclusively that this is so, for example, in domestic poultry. It is most improbable, however, that the mode of inheritance is simple. Fertility itself is likely to be the product of a number of different characters, each with its distinct genetic determinants. Thus, one would expect to find a general resemblance of parent and child, but no sharp segregation of the children, for fertility.

At the end of last century Karl Pearson and Alice Lee* analysed 1,000 families from the British Peerage and showed this expected tendency for father and son to resemble each other in their fertility. To retest this hypothesis, Jerzy Berent,† working for the Population Investigation Committee, has made use of the information collected in the survey of family limitation‡ made for the Royal Commission on Population. The data are valuable because all social classes are covered and the women are classified by social class and, perhaps more important, by whether or not they practised contraception.

The figures show conclusively that the family sizes of these women were positively related both to the family size of their own and their husbands' parents. Women who had few brothers and sisters averaged 2·6 children; women who had been one of a large family averaged 4·4 children. The relationship to the number of the fathers' brothers and sisters was less marked but still definite, the range being from 3·0 to 3·9 children per family. The same trends were present in each group when the women were classified according to their husbands' occupation into non-manual workers, skilled manual workers, semi- and unskilled manual workers. The same trends were also present when the women were divided according to whether they practised contraception or not. There is a suggestion that the relationship between the fertility of the women and of their parents is closer in the group practising contraception (where perhaps genetic and nurtural factors for genophilia come into play). The actual correlation coefficients are of the same order in this survey as in Karl Pearson's survey of the British Peerage fifty-two years ago.

It is not possible to say how much of this positive correlation between parent and

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* Pearson, Karl. "On the Inheritance of Fertility in Mankind." *Royal Society of London Philosophical Transactions.* Series A. 1899. Vol. 192.

† Berent, Jerzy. "Relationship Between Family Sizes of Two Successive Generations." *Milbank Memorial Fund Quarterly.* 1953. Vol. 31, No. 1.

‡ Royal Commission on Population. "Report of an Inquiry into Family Limitation." *Papers of the Royal Commission on Population.* 1949. Vol. 1.

child in fertility is due to genetic, and how much to social, inheritance. But that it exists is encouraging to those who hope that the deficits of Western Europe, at present attributable to the self-diminution of families who plan for less than three children, will in time be offset by an increase of families who plan more generously.

Artificial Insemination in Scandinavia

ON April 14th the London *Daily Telegraph* reported the findings of committees which, by an apparent coincidence, have been separately set up in Norway, Sweden and Denmark to study the legal aspects of artificial insemination. At the time of writing full reports are not yet obtainable from the embassies concerned, but the *Press Bulletin* of the Royal Norwegian Information Service contains a brief account of the findings of the Norwegian committee consisting of five persons. The majority, comprising a civil servant, a doctor and a teacher, made draft proposals for a law covering heterologous insemination (A.I.D.) of married women. The minority, a bishop and a housewife, consider that no law should be enacted, but do not feel that artificial insemination should be made illegal.

The majority proposal suggests that insemination should only be performed by a specialist doctor approved by the Directorate of Health, with the consent of the husband of the woman concerned. Both husband and wife should be at least twenty-five years old, and the resulting children should have the same legal status as a child conceived normally. There should be no legal tie with the anonymous donor, whose identity should remain unknown to the couple and vice versa. The doctor should assure himself that the donor was in no way related to the prospective mother. Insemination without the husband's consent should constitute grounds for divorce.

Bishop J. Smidt, one of the two minority members of the committee, is quoted as saying: "A large number of favourable factors must occur if insemination is to be successful. If the doctor is the right man with psychological insight and social understanding; if the donor spiritually and physically satisfies all requirements and can step back into obscurity; if the child's mother can retain unchanged feelings for her husband and completely share the child with him; if he on his side can overcome the feeling that the child is hers and not his; if they can preserve secrecy about the child's origin and if the child does not begin to speculate about the problem, then insemination may be successful. But who can steer clear of so many rocks?"

The Danish medico-legal committee, on the other hand, recommended legislation to regulate insemination for either married or unmarried women, and to require the doctor and the legal parents of the prospective child to agree on a donor; in special circumstances the doctor should be allowed to accept a donor designated by the parents. "In law, however, the donors should be anonymous and should not be proceeded against for maintenance of children born with their aid. Nor should there exist any record of children conceived through artificial insemination. Such children should be completely protected by law."

The Swedish committee, it is reported, recommends that artificial insemination should be legalized in Sweden, provided that it is carried out in hospitals.

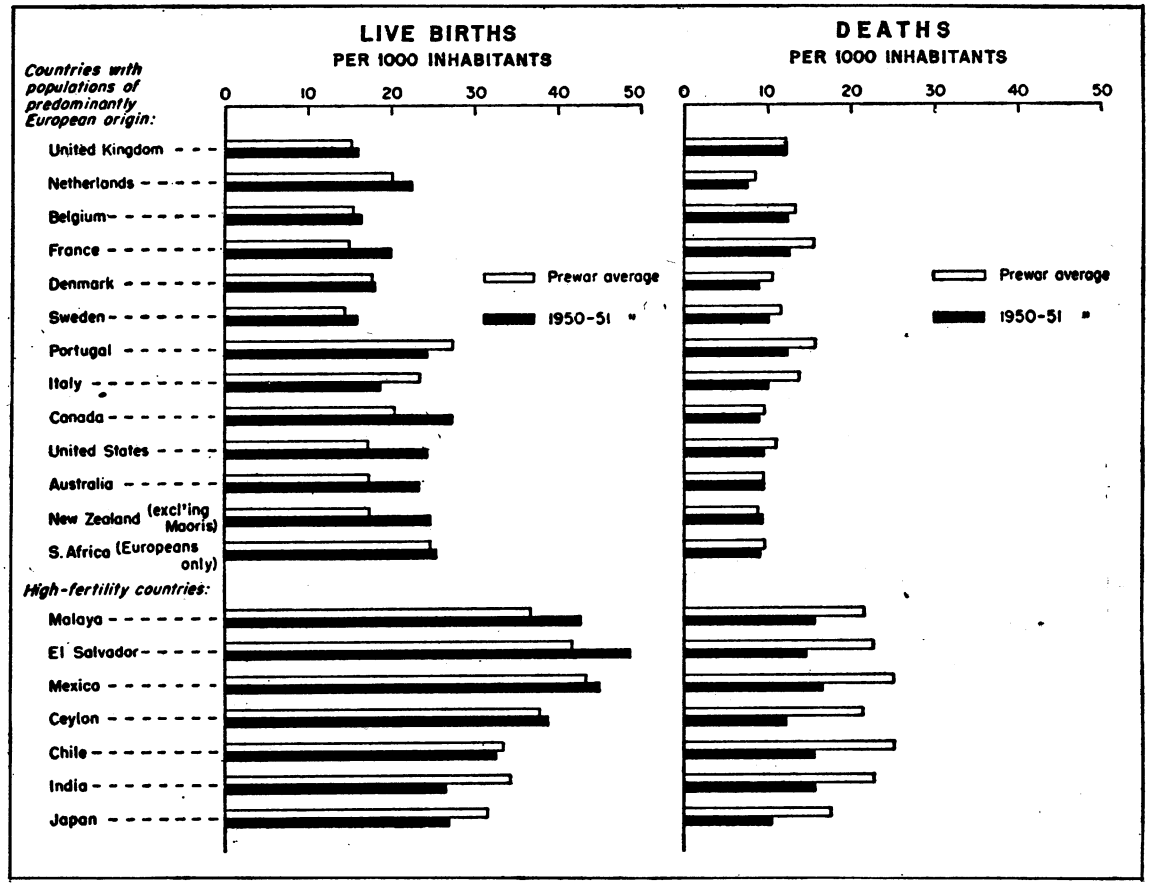
It is to be hoped that fuller details of the findings will shortly be available, when they can then be made the subject of informed comment in these columns.

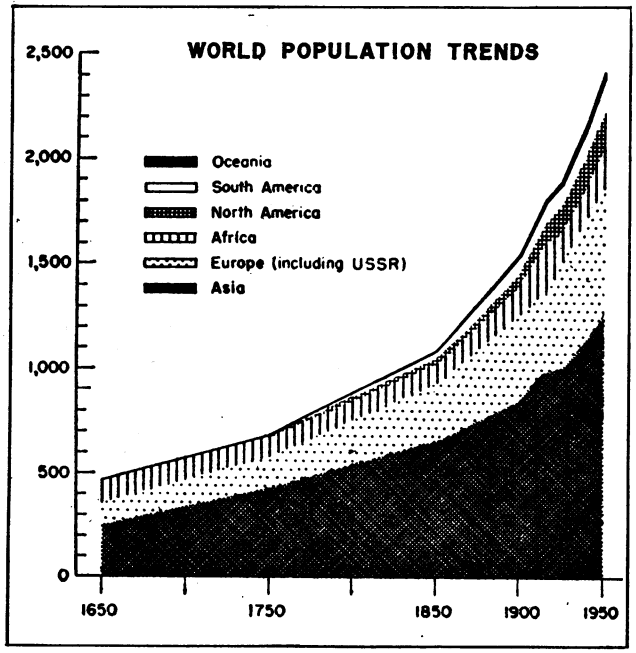
Vital Statistics

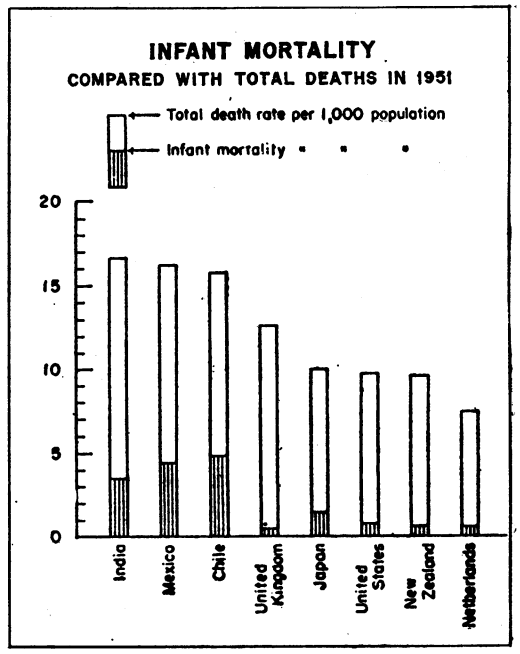
WE are indebted to the Editor of *The Economist* for permission to reproduce three population charts which appeared in the issue of that journal dated April 25th, 1953.

It will be seen that the first chart compares birth and death rates before and after the war—a prewar average with an average for 1950-51. Thirteen countries with populations of predominantly European origin (eight of them European countries) are contrasted with seven "high fertility countries." All except two of the thirteen countries in this first group have had higher birth-rates after than before the war, the exceptions being

BIRTHS AND DEATHS







Portugal and Italy; and of the "high fertility countries," three (Chile, India and Japan) show reduced fertility.

But if death-rates are compared in the two groups, it will be seen how much more conspicuous is the reduction attained in the seven high fertility countries than in the thirteen others.

The second chart shows in striking diagrammatic form how world population has increased in the last 300 years. The accelerative trend of growth is well shown; a steady rise up to 1850 is followed by an increasingly steep rise in the ensuing century. The diagram further shows the contribution to world growth by six major regions. It will be seen how massive is the Asian quota throughout the period, especially conspicuous in the first 200 years. The increasing contribution of the Americas and Oceania since 1800 is also noteworthy.

The third diagram compares the infant mortality of eight countries with their total deaths.

India has the highest death-rate and the third highest infant mortality rate, the Netherlands the lowest death-rate and the United Kingdom the lowest infant mortality.

The Council

THE Chairman writes: The March Meeting had a heavy Agenda in front of it. Of some interest and value was a review of the *Society's* activities from the financial angle over the past six years, and an examination of its assets and powers of expenditure. In short, it has spent £236 per annum in that period over and above its annual income, after crediting special gifts. Apart from its regular activities, some of the larger individual grants and items were:

	£
The Scottish Council for Education	2,000
Problem Families Pilot Inquiry	500
International Planned Parenthood Conference	750
Staff Pension Fund	1,000
Pensions paid	1,312
Written off the value of Leasehold	450

The Council minuted the view that it would be prepared to continue an active policy, and to finance special projects, if need be beyond its annual income.

Several projects were then the subject of full initial discussion and were, *inter alia*, the Promising Families Inquiry, to include an attempt to devise scales for measuring "temperament" and "character," leadership qualities, etc., Oral Contraceptive Research, support for the F.P.A.'s Approved List of Contraceptives, a Five-Purpose Parenthood Centre in conjunction with an existing organization, and a research and study group jointly with P.E.P. to prepare an authoritative volume on World Population Policy in view of the UNO Conference, 1954.

The Council proposes to surrender the existing lease of its premises at 69 Eccleston Square, S.W.1, and to take a new long-term lease.

Professor L. S. Penrose, F.R.S.

WE offer our sincere congratulations to Dr. Penrose, Galton Professor of Eugenics at University College, London, on his recent election to the Fellowship of the Royal Society, in recognition of his notable and outstanding contributions to human genetics, especially those of mental defect.

OBITUARY

Mrs. C. B. S. Hodson

WE record with great regret the death on May 21st, 1953, of Mrs. C. B. S. Hodson, who was associated with the *Eugenics Society* for many years.

DR. C. P. BLACKER writes: Mrs. Hodson became the Secretary of the *Society* in 1920 and it was through her activities in the ensuing decade that she will best be remembered. They were difficult years of post-war reorganization and restricted means, for Mr. Twitchin's bequest, which made the *Society* rich, had not then materialized.

Mrs. Hodson had several gifts from which the *Society* benefited. She was an extremely hard and willing worker. In addition to shouldering the routine duties of Secretary, she concerned herself much with the REVIEW which, until it was taken over by Mr. Eldon

Moore, she edited. Mrs. Hodson wrote much in its columns.

She was a most capable public speaker and at public meetings, which she assiduously attended, she never tired of putting the eugenic point of view. Her gift for languages and a native habit of courtesy which expressed her simple, humble and generous nature, made her popular with foreigners and established for her many international contacts and friendships.

It was a philanthropic and religious cast of mind that led her to recognize a spiritual side of evolution and, at this period of her life, inclined her towards eugenics. Eugenics, she felt, enlarged humanity's control of its destiny. In a book entitled *Human Sterilization Today*,* she suggested that the powers invoked by some eugenists were potentially dangerous in the measure that they could be easily applied. Indeed, eugenics could only become "an instrument of progress in proportion to the humility with which it is used."

THE HON. MRS. GRANT DUFF writes: Cora Brooking Hodson was born in 1875—the eldest of the nine children of James Harris Sanders of Devonshire stock and Marie Louise Day, youngest daughter of James Ingersoll Day of Stonington, Connecticut—an old New England family. She spent most of her childhood and youth in a beautiful old country house. Her mother was intensely interested in "nature" and called her children's attention from infancy to all forms of bird and insect life, filling their nursery with picture books of wild flowers, fishes and animals. Cora was educated by two governesses, English and German; her formal education was purely literary and linguistic—French and German being spoken on alternate weeks. At Oxford she studied German and Italian, taking a first class in both. She also took several science groups and remained at Lady Margaret Hall as a don until 1906.

She then became very much interested in mental diseases, and studied their heredity and treatment; during this period she undertook research work for Professor Edward Poulton, Professor Karl Pearson and others, and for some time taught science in schools.

She married Dr. Fred Hodson in 1910. He died in 1918, and in 1920 she was appointed Secretary of the *Eugenics Society*.

With her knowledge of languages and her scientific training, she proved a first-class interpreter at international conferences. She was intensely keen about everything she did—sometimes, perhaps, too much carried away by her enthusiasm. Heart and soul knew no bounds, and sad it is that the last two years of her life were clouded by illness, but she died peacefully in her sleep on May 21st, 1953.

She had a gift for friendship and many friends will keep her memory alive.

*Watts. Forum Series. 1934.

Professor R. D. Laurie

WE regret to record the death on April 7th, 1953, of Robert Douglas Laurie, Emeritus Professor of the University College of Wales, Aberystwyth. Professor Laurie joined the *Eugenics Society* in 1921 and became a member of the Consultative Council in 1924.

PROFESSOR LILY NEWTON writes:

The recent death of Emeritus Professor R. Douglas Laurie, in Amsterdam, was a great shock to his many friends all over the world, for his friendships may truly be said to be worldwide. His life interests were concerned not only with his subject of zoology but also with social matters and the administrative affairs of inter-university life. As a member of the senate and the head of a department, he gave years of devoted service to the University College of Wales, Aberystwyth. His students found in him not only an inspiring teacher but a friend who was always ready to help and advise. He took a permanent interest in their well-being and showed great ingenuity in finding suitable posts for those whose gifts were of an unusual kind. He had the great capacity of seeing the best in people and inducing them to live up to his belief.

He took a keen interest in the *Eugenics Society*, and in social problems generally, as well as in the Universities' Federation for Animal Welfare, of which he was a vice-president. He was particularly interested in the application of the study of zoology to social welfare, and he did more than any other single person towards the establishment of zoology as a subject in schools, whether it was regarded as nature study, as part

of general science or biology courses or as a specialist subject at the higher levels. He also for many years conducted courses in summer schools on the teaching of biology in schools.

Professor Laurie may be said to have founded the Association of University Teachers in this country in 1919 and was its first president and thereafter its only honorary general secretary until the time of his death. There must be many who remember the great occasion at Oxford when delegates from all over the world were gathered together to discuss the extension of the activities of the association to members of the staffs of universities beyond the seas. From that meeting the present International Association of University Professors and Lecturers ultimately grew, and the wider interest that it created gave Professor Laurie great joy in the later years of his life, when he acted as its honorary secretary-general. Even in ill-health his interest never waned and he continued to plan the future of the association.*

* We are indebted to the Editor of *The Times* and to Professor Lily Newton for permission to reprint these paragraphs, which appeared in *The Times* of April 24th, 1953.